

REMARKS

Status of Application

Claims 1-15 are all claims pending in the present application.

Claim Rejections Under 35 U.S.C. § 102

The Examiner has rejected claims 1, 2, 4, 6-10, 12, 14 and 15 under 35 U.S.C. § 102(a) as allegedly being anticipated by D.S. Liu, Y.C. Chao, and C.H. Wang, Study of Wire Bonding Looping Formation In The Electronic Packaging Process Using Three-Dimensional Finite Element Method, Finite Elements in Analysis and Design 40 (2004) (“Liu”). Applicant respectfully traverses the rejection for at least the following reasons.

Claim 1 is directed to “[a] rotation angle calculating method of a wire harness.” The Examiner asserts that Liu also describes a rotation angle calculating method of a wire harness. However, the cited reference only appears to describe the modeling of a wire, not of a wire harness. For example, the introduction of Liu describes how the capillary tool, depicted in Fig. 1 of that reference, plays out a gold wire used for interconnections on the surface of a semiconductor chip. Nowhere in Liu is the gold wire described as having any harness whatsoever. Thus, Liu fails to disclose this feature of claim 1.

Claim 1 further requires “adding the angles to each other so as to calculate a rotation angle having a rotation direction at the measuring point.” The Examiner cites Figs. 23, 26, and 27, in relation to this element of claim 1. These figures appear to show the shape of the curvature of the gold wire modeled in Liu for a variety of “reverse angles.” As shown in Figs. 22 and 25, for example, the “reverse angles” described in Liu refer to angles in the

trajectory of the capillary element, which is the element that plays out the gold wire. Thus, the various angles described in Figs. 26-29 of Liu do not refer to angles at nodes along any representation or model of the gold wire, but rather, refer to angles in the trajectory of motion of the capillary element. Moreover, none of the cited figures of Liu, or their related descriptions, appear to teach “adding the angles to each other so as to calculate a rotation angle having a rotation direction at the measuring point,” where “the angles” are “defined between the node vectors at the adjoining nodes” of a wire harness, as required by claim 1.

Thus, Liu fails to teach each and every element of claim 1, and therefore fails to anticipate claim 1. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 1 and its dependent claims 2, 4, 6, 7, 8, 10, 12, 14 and 15.

Independent claim 9 recites features similar to those of independent claim 1. Claim 9 is, therefore, also patentable at least for reasons analogous to those set forth above with respect to claim 1. Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claim 9.

Allowable Subject Matter

Claims 3, 5, 11 and 13 are objected to by the Examiner as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims. Applicant respectfully holds in abeyance the rewriting of these claims pending further prosecution of parent claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

This Application is being filed via the USPTO Electronic Filing System (EFS). Applicant herewith petitions the Director of the USPTO to extend the time for reply to the above-identified Office Action for an appropriate length of time if necessary. Any fee due under 37 U.S.C. § 1.17(a) is being paid via the USPTO Electronic Filing System (EFS). The USPTO is also directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Christopher R. Lipp
Registration No. 41,157

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON DC SUGHRUE/265550

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